



Policy Brief

Does the professionalization of community-based childcare improve school performance of disadvantaged children?

An impact evaluation of Vivamos Mejor in Colombia

funded by Swiss Agency for Development and Cooperation SDC
in collaboration with the University of Lausanne
with supervision of NADEL-ETH

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Introduction

In Colombia, timely school enrolment and long-term school attendance are not a matter of fact for all children, particularly not for those from disadvantaged or internally displaced backgrounds. The Colombian government has been prioritizing preschool education in order to change this fact for several years. The most widespread measure is the *hogares comunitarios* (HCs, community-based nurseries) programme, reaching about 800,000 children from poor households. The programme pays for the children's food and the salary of carers, who look after children in their own home. However, the quality of care provided within this programme is insufficient (Bernal 2015). Therefore, Vivamos Mejor started a project in 2011 to professionalize these community-based

nurseries, aiming to enhance the quality of care.

In 2016, Vivamos Mejor commissioned researchers of the University of Lausanne to carry out an impact study on this project with funding from the SDC/NADEL impact award. The study was embedded within the framework of a PhD project, with joint funding from the University of Lausanne.

Vivamos Mejor implemented the project through the local NGO *Fundación Apoyar* between 2011 and 2013 in 60 HCs in the neighbourhood of *Las Ferias*, located in the city of La Dorada, Colombia. This is a densely populated neighbourhood of about 25,000 inhabitants

Vivamos Mejor: strengthening Latin American communities with knowledge

Vivamos Mejor is a charitable, politically neutral, non-denominational non profit organisation that has been helping to improve the living conditions of disadvantaged people in Latin America for 35 years by pursuing a targeted «Help for Self-Help» approach. We strive to make improvements in the circumstances of underprivileged families and young people in particular and to help them to lead independent lives. We thereby make an important contribution to achieving goals in terms of sustainable development, gender equality, and the reduction of poverty in all its forms.

Local embeddedness

Vivamos Mejor realises all its projects in close cooperation with professional local partner organisations that exclusively employ local personnel. Through training and capacity building, we share our knowledge with local communities and authorities, who take complete ownership of their responsibilities and are accountable for results. Our beneficiaries receive an initial helping hand, but right from the start, they do much of the work themselves to establish an independent foundation. After the conclusion of the project, local stakeholders continue to manage the work. As an organisation committed to continuous learning we closely monitor and assess the results of our work in cooperation with Swiss and local universities.

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with a high incidence of poverty, often related to internal displacement. In close collaboration with the state agency *Instituto de Bienestar Familiar* (ICBF), the project focused on professional education and on-the-job training of the carers, the implementation of the ICBF pedagogical model in the HCs, parent education, registration of children in public health care and school, and extra tuition and monitoring of school attendance. *Vivamos Mejor* assumed this intervention to provide children from disadvantaged backgrounds with age-specific stimulation and non-violent parenting styles, enabling them to improve their developmental outcomes and to acquire the necessary skills for successful transition to and progress at school.

With this impact evaluation, *Vivamos Mejor* provides evidence on possible policy solutions to improve the quality of preschool programmes in Latin America. Such programmes have gained increasing government attention and spending since the 1990s. However, research has pointed out that while short-term improvements exist, the quality of care is low and the competencies of caregivers are insufficient (Araujo et al. 2013; Bernal et al. 2009; Bernal 2015; Attanasio et al. 2013). A high quality of care, however, is crucial to guarantee that preschool education for disadvantaged children realises its benefits (Barnett 1995). Nevertheless, not much research has been done on how to improve the effectiveness of preschool programmes. Moreover, besides a few exceptions (Berlinksi et al. 2008, 2009), the question of whether short-term effects persist in the longer term generally remains open (Behrman, Fernald, & Engle 2013).

Study design

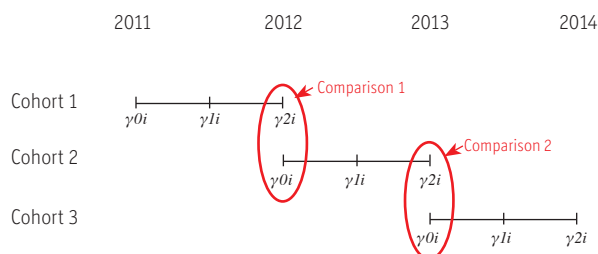
Hence the current challenge in Latin America is enhancing the quality of childcare programmes so that it has a longer-term impact on school performance of disadvantaged children. This study helps to address this challenge by comparing skills of children at quality-improved HCs with those of children in other HCs in the same neighbourhood, viewed in both the short and the long term:

1. Does the programme have an **immediate effect** on the cognitive, psychomotor and psychosocial development of children after one year?
2. Does the programme have a **long-term effect** on school performance, prosocial behaviour, patience, trust and self-esteem of children, 3½ to 4½ years after the treatment?
3. Does the programme affect parents with respect to their parenting styles and prosocial behaviour in the long term?

For the **immediate development outcomes**, the study used available data on cognitive, psychosocial and motor skills. This data was gathered at the beginning and throughout project implementation with the *escala abreviada de desarrollo*. This is a standardized survey developed by UNICEF, which is widely used in Latin America to measure the developmental status of children. For the analysis of the **long-term effect**, the researcher collected school grades and undertook standardised behavioural lab-in-the-field experiments to evaluate prosocial behaviour, trust, and patience. These experiments use playful games where children have to make decisions on how to distribute rewards between themselves and others. For self-esteem, the study applied the EDINA questionnaire (Mérida et al. 2015), containing statements such as: "I like my body, I am an important child", and so on. Due to data limitations, it was not possible to obtain either school enrolment or dropout rates.

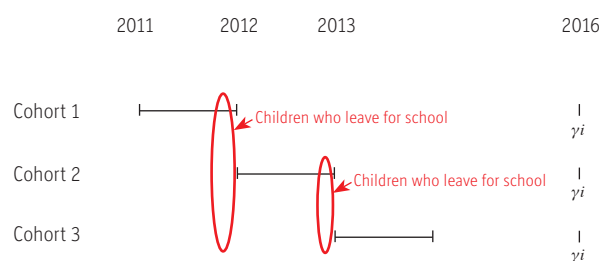
For the control group, the study identified children who had been attending the HC nurseries before the intervention of *Vivamos Mejor* started. This was possible because of the phased implementation. In 2011, the project started in the first 20 HCs, whereas the next 40 HCs were treated in 2012 and 2013, respectively (Figures 1 and 2).

Figure 1: Design of the short-term evaluation



The control group for the **immediate development outcome** was the baseline measurement of the *escala abreviada de desarrollo* of the second cohort. This data was compared to the endline data of the treated children of the first cohort. Additionally, the baseline of the third cohort was used as a control group for the effect on the second cohort. With these two comparison groups the study reached a sample size of 325 children in the treated group, and 303 children in the control group.

Figure 2: Design of the long-term evaluation



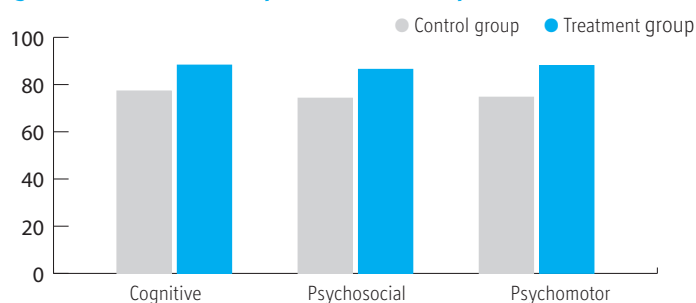
Similarly, in the **long-term analysis** the study identified children that had been attending the HCs of cohort 2 and 3, but left for school before the project started. Children in the control group and the treated group started school at the same time. The sample size was 173 children in the control group and 123 in the treated group. These children were attending grades 2 to 4 of primary school at the time of data collection.

The study used OLS regressions to estimate the effects. To confirm the results, the study applied two robustness checks. Significant results reported have a p-value of 0.1 or smaller.

Main Findings

Immediate outcome on skills development: The study provides evidence that the intervention led to large and statistically significant skills gains for the treated children. After one year of intervention, children performed considerably better on the cognitive, psychosocial and motor indexes of the *escala abreviada de desarrollo* (Figure 3). While the averages of the control group were behind those in Colombia, the averages of the treated group corresponded to the averages of children in Colombia. Hence, thanks to the intervention, children from disadvantaged backgrounds were able to catch up with the national averages. The study observed a small gender gap in favour of boys in the cognitive and psychosocial dimension, which persisted after the treatment.

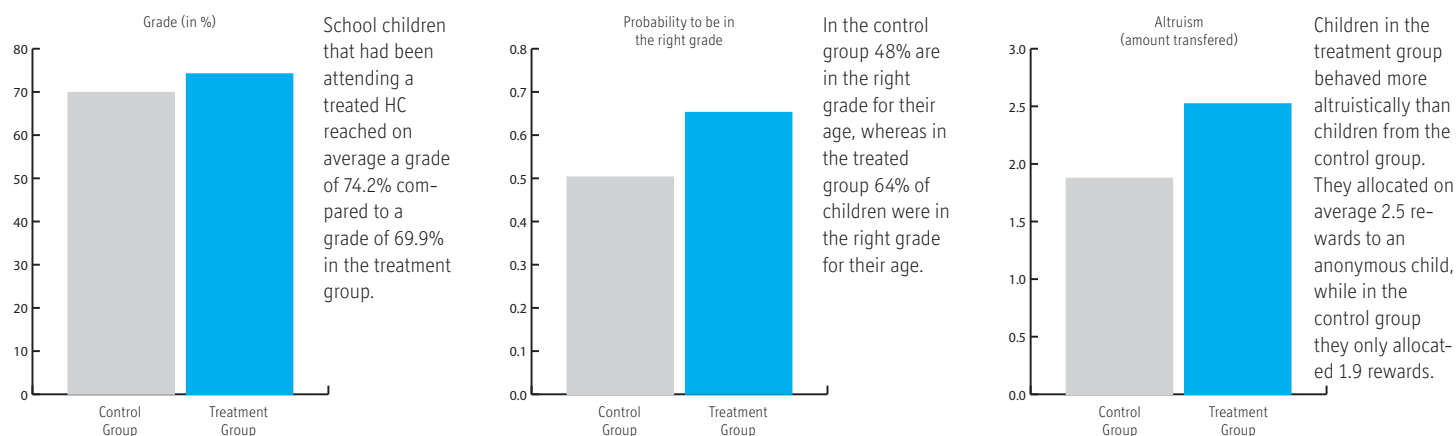
Figure 3: Immediate development outcomes in preschool children



Treated children fulfilled 88% of the cognitive, 86% of psychosocial and 88% of psychomotor tasks in the survey, while the control group reached 77%, 74% and 75% of the respective tasks.

According to the *Tablas de normas para la población colombiana* (in Ortíz Pinilla 1999), the average for cognitive development in that age group is 85%, for psychomotor 87% and for psychosocial 88%.

Figure 4: Long-term effect on school performance and prosocial behaviour



Long-term effect on school performance and prosocial behaviour: The study indicates that the positive immediate effects persisted in the long term and positively influenced school performance and prosocial behaviour of children up to four and a half years after the treatment. These skills gains presumably influenced the transition to subsequent grades: children in the treated group were 16% more likely to be in the right grade for their age (Figure 4). Treated children seemed to trust more than the control group, however, this difference was just statistically insignificant. No effect was found on self-esteem and patience. While the study observed a small gender gap in the short term, this was not the case in the longer-term analysis.

Long-term effects on parenting styles and intergenerational transmission of values: An important aspect of the intervention was to educate parents about child development and positive parenting. A standardised survey (Baumrind 1971) on parenting styles, filled out by a relatively small sample of 48 parents of children in the control group and 48 parents of children in the treatment group, did not show any effect. Equally, no effect was found for prosocial behaviour, trust or patience, evaluated with the same group of parents using behavioural games. However, the study found that altruism and trust of parents and their children correlated in the treated group, while they did not in the control group. This indicates that the intervention might have positively influenced the parent-child relationship and fostered the transmission of values and preferences. The results on parenting styles and the intergenerational transmission of values give a first indication but would need further research with a larger sample size to be confirmed.

Relevance and Recommendations

This impact study evaluates whether it is possible to improve the quality of community-based childcare in Colombia, so as to have a long-term effect on school performance of disadvantaged children. The results suggest that this is possible. The study attests substantial positive effects not only on immediate, but also on long-term skills acquisition of children. It shows that children attending a qualified HC are able to catch up with the Colombian average regarding their cognitive, psychosocial and psychomotor skills, thereby overcoming the gap related to their socio-economic origin. This translated into better school grades and social skills in the longer run and, most importantly, the progression to subsequent grades of primary school.

The impact evaluation provides evidence that investments in the qualification of the HC programme are effective. This conclusion holds true when looking at costs: the HC programme costs around US \$444 per child per year (Bernal et al. 2012). The quality improvement implies an additional cost of US \$455, with a potential to be reduced at scale. These costs are relatively low compared to a US \$1,752 per child per year (Bernal et al. 2012) of the centre-based modality (CDIs, *centros de desarrollo infantil*), which is another important preschool programme in Colombia. Thus, while the quality improve-

ment implies a doubling of the investment, the costs are still half, compared to the costs of CDIs. Furthermore, based on numbers published in Chetty et al. (2011), Bartik et al. (2012) and Flossmann et al. (2007), the study estimated a 4% wage gain resulting from skills acquisition. This suggests that the investment breaks even 16–20 years after labour market entry.

The intervention could be a blueprint for similar investments in the quality of childcare. It engages with children early in life, when small changes can bear large returns later on. Hence, the intervention is a feasible and cost-effective alternative for improving quality in the currently most widespread government preschool programme, reaching almost 1 million children from the poorest families. The study supports future investments in childcare quality programmes, such as the one implemented by Vivamos Mejor and its local partner Fundación Apoyar.

Lessons Learnt

Community-based preschool modalities should be considered in the discussion on quality improvement of preschool education for disadvantaged children. The study shows that high quality care is possible in community-based structures, which might have further benefits for neighbourhood self-assistance and organization. It would be worthwhile to evaluate how this programme compares to another important governmental programme, using a centre-based approach in CDIs. Hence, the benefits of these two programmes need to be compared in more detail, including not only skills acquisition of children but also issues such as parental involvement and community empowerment.



For the improvement of quality in the HC programme it is important to consider that many of the carers are from low educational and socio-economic backgrounds (Bernal 2015). Not only do they need qualification through professional education but also on-the-job training in the implementation of a pedagogical model and age-specific stimulation methods. The study also indicates that the instruction of carers on how to undertake parent workshops on positive parenting styles and child development is a crucial aspect to include. The intervention did not have an effect on the patience of children. Research shows that patience is a crucial trait for success in life (Sutter et al. 2013). The study recommends, therefore, to include specific stimulation methods that help children to be patient and to value future benefits.

To be able to better disentangle the effects of the different components of the programme, a randomised study should be considered. Such a study would give insights into unanswered questions such as: What component of the intervention produced the largest effects? Are all components necessary or can one component be left out? Does the programme affect siblings and peers in school? Furthermore, the role of parent education within the programme could be elaborated in more detail.



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